

What is claimed is:

[Claim 1] A method of providing a design report regarding natural stone facade or flooring construction project, the method comprising of characterizing individual natural stone products, optimized placement of each natural stone product, and accurate visual and quantitative representation project.

[Claim 2] The method of claim 1 wherein the entire method is practiced at the construction site.

[Claim 3] The method of claim 1 wherein the characterization of the natural stone product is practiced at a remote location such as the stone quarry and the other processes practiced at a different location such as architect office or construction site.

[Claim 4] A system of providing a design report regarding natural stone facade or flooring construction project, the system comprising of optical imaging and ranging detectors, digitized information such as spatial contour, surface, veining pattern and appearance, and three dimensional data, optimized placement of each natural stone product based on prioritized design requirements, and graphical visualization display of the constructed facade or flooring project.

[Claim 5] The system of claim 4 wherein the entire system is located at the stone quarry or construction site.

[Claim 6] The system of claim 4 wherein the respective subsystems are located in geographically diverse locations.

[Claim 7] A method of providing an unique identifier tag code for each natural stone product wherein the tag code contains a condensed representation of visual, geometric and other physical characteristics of the natural stone product.

[Claim 8] The method of claim 7 wherein the tag code is labeled on each characterized natural stone product.

[Claim 9] The method of claim 7 wherein the tag code is stored in machine-readable media for selection and optimized placement of the characterized natural stone product.

[Claim 10] A method of providing preassembled modular units of characterized natural stone products to achieve certain artistic expression, dimensional profiles or sculptured imagery.

[Claim 11] A method of providing preassembled modular units of characterized natural stone products to achieve desired physical properties such as slip resistance, self-draining, or ease of installation and maintenance.

[Claim 12] A method of providing preassembled modular units of characterized natural stone products that can be used for customized design and alteration at any construction site.